

WHAT IS CLAIMED IS:

1. A receiver for a listening device, comprising:
a bobbin comprising a coil-receiving portion that is adapted to receive a coil of wire, said coil-receiving portion having inner surfaces that define a passage through said bobbin parallel to a longitudinal axis of said coil-receiving portion;
an armature disposed in said passage and adapted to generate an acoustic signal in response to an electrical signal passing through said coil of wire;
a diaphragm connected to said armature and driven by said armature to thereby broadcast said acoustic signal to an ear drum of a user of said listening device; and
at least one shock-absorbing structure mounted on one of said inner surfaces of said coil-receiving portion, said at least one shock-absorbing structure configured to limit a movement of said armature when said receiver is subjected to shock.
2. The receiver according to claim 1, wherein said at least one shock-absorbing structure comprises drops of cured adhesive.
3. The receiver according to claim 1, wherein said at least one shock-absorbing structure is made of an elastomeric material.
4. The receiver according to claim 1, wherein said at least one shock-absorbing structure and said bobbin are made from similar material.
5. The receiver according to claim 1, wherein said passage through said bobbin is defined entirely by said coil-receiving portion.
6. The receiver according to claim 1, wherein said passage through said bobbin is defined partially by said coil-receiving portion.
7. The receiver according to claim 1, further comprising first and second flanges on said bobbin, at least one of said first and second flanges having grooves formed on an edge thereof, said grooves for receiving lead wires of a wire wound around said coil-receiving portion.

8. The receiver according to claim 7, wherein said grooves are substantially V-shaped.

9. The receiver according to claim 7, further comprising slots formed on opposing edges of said first and second flanges, each opposing edge lying in a plane that is substantially perpendicular to said plane of said armature, said slots for receiving a portion of said armature.

10. The receiver according to claim 9, wherein said slots have a substantially rectangular shape.

11. A bobbin capable of guiding a lead wire of a coil, comprising:
first and second flanges;
a coil-receiving portion connecting said first and second flanges, said coil-receiving portion having said coil formed thereon;
wire guides formed on an edge of at least one of said first and second flanges, said wire guides configured to guide a lead wire of said coil.

12. The bobbin according to claim 11, wherein said wire guides are substantially V-shaped.

13. The bobbin according to claim 11, further including glue applied to said wire guides after said coil is formed to hold said lead wires in place.

14. A receiver for a listening device, comprising:
a magnet assembly;
an armature having a moveable portion and a fixed portion; and
a coil assembly including a bobbin and a conductive wire wound around said bobbin, said coil assembly being adjacent to said magnet assembly and, together with said magnet assembly, defining a passage through which said moveable portion passes, said bobbin including an armature-mounting structure, said moveable portion

of said armature being substantially centered within said passage in response to said fixed portion being engaged to said armature-mounting structure.

15. The receiver according to claim 14, wherein said bobbin includes first and second flanges and said armature-mounting structure is formed on opposing edges of said first and second flanges, each opposing edge lying in a plane that is substantially perpendicular to a plane of said armature.

16. The receiver according to claim 14, wherein said armature-mounting structure has a shape that substantially matches a shape of said fixed portion of said armature.

17. The receiver according to claim 16, further comprising wire guides formed on an edge of at least one of said first and second flanges, said wire guides configured to hold lead wires of said conductive wire wound around said bobbin.

18. The receiver according to claim 14, wherein said armature is an E-shaped armature.

19. An electromagnetic drive assembly for a listening device, comprising:
a magnet assembly;
an armature having a moveable portion and a fixed portion;
a coil assembly including a bobbin and a conductive wire wound around said bobbin, said bobbin comprising a coil-receiving portion that, together with said magnet assembly, define a passage through which said moveable portion of said armature passes, said coil-receiving portion having a shock-absorbing structure mounted on an inner surface of said coil-receiving portion, said shock-absorbing structure configured to limit a movement of said moveable portion of said armature, said bobbin further comprising first and second flanges, said first and second flanges having wire guides formed on an edge of at least one of said first and second flanges, said wire guides configured to hold lead wires of said conductive wire, said first and second flanges further having armature-mounting structures formed on opposing edges of said first and second flanges, said armature-mounting structures configured

to receive and support said fixed portion of said armature and to center said moveable portion of said armature in said passage; and
a drive pin connecting said armature to a diaphragm of said receiver.

20. A method of inhibiting deflection on an armature due to shock in a receiver for a listening device, comprising:

providing shock-absorbing elements on an inner surface of a bobbin through which said armature passes; and

limiting a movement of said armature resulting from said shock by engaging said armature on said shock-absorbing elements.

21. The method according to claim 20, further comprising bracing said armature by engaging at least a portion of said armature in an armature-mounting structure provided on said bobbin.

22. The method according to claim 21, wherein said step of bracing said armature also automatically centers said armature in said bobbin.

23. A method of assembling a receiver for a listening device, comprising:
winding a conductive wire around a bobbin, said bobbin having an armature-mounting structure formed thereon;

inserting a middle leg of an armature in said bobbin; and

placing at least one outer leg of said armature in said armature-mounting structure such that said middle leg of said armature is automatically centered in said bobbin.

24. The method according to claim 23, further comprising placing a lead wire of said conductive wire in a groove formed on said bobbin, said groove holding said lead wire on said bobbin.

25. The method according to claim 23, further comprising forming at least one shock-absorbing structure on an inner surface of said bobbin, said at least one shock-absorbing structure limiting a movement of said middle leg when said receiver is subjected to shock.